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## Note on some eggs and nests attributed to the Stork-billed Kingfisher, *Pelargopsis capensis* (Linne)

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When the eggs of the Stork-billed Kingfisher, *Pelargopsis capensis* (Linné), in the collection of the British Museum (Natural History) were examined, five clutches of small eggs were found which appear to have been wrongly attributed to this species. Since these clutches, with the relevant data, were used in the description of the eggs and nest of this species by A. O. Hume (1890) and referred to by later authors, it is necessary to re-examine them in the light of later knowledge in order to establish their correct identity.

Authentic eggs of *Pelargopsis capensis* are within the following size limits—length 39.9-34.2 mm., breadth 32.5-29.3 mm., average size 36.6 x 30.9 mm. (Baker 1934).

One clutch of the small eggs whose identity is questioned was taken by J. R. Cripps at Dibrughur (Dibrugarh), in Assam, on 27th April, 1880. This became part of the Hume collection (B. M. Reg. No. 91.3.20.7765-8) and a description was published in Hume's "Nests and eggs of Indian birds" (1890) under the species *Pelargopsis gurali* (now *Pelargopsis capensis*). The nest was in an 18 inch tunnel in the earth on the roots of a fallen tree. The eggs measure 29.25 x 27 mm., 27.25 x 25 mm., 29 x 26.75 mm. The original clutch contained four eggs. In the same account data are given for a clutch of the larger eggs whose authenticity was established by being collected together with a sitting bird.

Another clutch of small eggs was collected by C. Hopwood for H. N. Coltart's collection (B. M. Reg. No. 1961.1.304) at Mokka Choung,

Tharrawaddy, Burma, on 14th April, 1904. He claimed that identity was certain, and described the nest as a hole in a bank 18 inches deep with eggs laid on bare earth. The eggs measure 28.5 x 25.75 mm., 27 x 24.5 mm., 29 x 24.5 mm., 28.25 x 24.5 mm. Someone, possibly Coltart, had noted that the identification was wrong.

The remaining three clutches of small eggs were taken by C. J. Bingham in Tenasserim. The first is a clutch of three (B. M. Reg. No. 84.5.23.21-3) from Thoungyeen, N. Tenasserim, taken on 5th April, 1882. They measure 30 x 26.25 mm., 29.5 x 26.25 mm., 29 x 26.75 mm. The second is a clutch of four from the Hume collection (B. M. Reg. No. 91.3.20.7738-41) taken on the Meplay at Thoungyeen on 23rd March, 1880. They measure 29.25 x 26 mm., 30 x 26.5 mm., 29.5 x 26.25 mm., 28.75 x 25.25 mm., Bingham describes (Hume, loc. cit.) watching the birds visit the nest—a five foot tunnel in the bank, the nest cavity quite bare. The third is a clutch of three from the Hume collection (B. M. Reg. No. 91.3.20.7735-7) taken at Sinzaway, Tenasserim, on 10th April, 1877. They measure 29 x 25 mm., 29.75 x 25 mm., 28.25 x 24.75 mm. They were taken under exceptional circumstances, for Bingham wrote (1877): 'I am rather diffident about writing a note on the finding of the eggs of this bird, as they were found by myself personally in a made nest in the fork of a bamboo growing near the bank of a choung, a thing contrary to the habit of all kingfishers. Moreover, though I fired at the bird as she flew off the nest, I missed her. In my own mind there is not the ghost of a doubt that the eggs in question belonged to the above species, as I had a close look at the bird, as she sat on the nest, with a pair of binoculars, at not more than 15 yards distance. The nest was, as I have already said, placed in the fork of a bamboo near water. It was a loosely constructed shallow cup of rough grass-roots, wholly unlined, at a height of about 4 feet from the ground.'

These five clutches of eggs can only be attributed to *Pelargopsis capensis* if it is assumed that this species lays eggs of two distinct sizes, intermediate sizes being absent. The difference cannot be regarded as sub-specific since clutches of larger and smaller eggs have been collected in the same areas. It is obvious that there has been confusion with some other Kingfisher and, since identification was based on sight records, the species should be smaller but sufficiently like *P. capensis* in general colouration to justify misidentification if a short generalised description was the only available reference at the time.

The only species which fits these requirements is the White-breasted Kingfisher, *Halcyon smyrnensis* (Linné). This has a heavy red bill and blue colour on the wings, rump, and tail, as does *P. capensis*. Its smaller size, white throat, and deep brown head and breast should distinguish it from the larger, buff-brown *P. capensis*, but it is difficult to envisage how the bird will appear in the field, and few, if any, published descriptions suitable for field use appear to have been available at the period when most of these clutches were collected. The eggs of *H. smyrnensis* are within the following size limits—length 31.1-26.0 mm., breadth 28-25 mm., average size 28.9 x 26.2 mm. (Baker 1934). This agrees with the sizes of these small eggs.

The Black-capped Kingfisher, *Halcyon pileata* (Boddaert), has a similar sized egg, and is present in the areas concerned, but its colouration is so

distinctive that it is improbable that confusion could occur between this and other species.

Stuart Baker (1927) suggested that the clutch of small eggs taken by Cripps at Dibrughur was probably that of *H. smyrnensis*, but in a later work (Baker 1934) he quoted the description of the nest when referring to *P. capensis*.

The description by Bingham of a nest in a bamboo fork has already been quoted. Stuart Baker (1934) mentioned it but said that the nest was almost certainly that of some other bird. Later authors have ignored the account. Yet in the same work Stuart Baker describes in some detail his discovery of the fact that some pairs of *H. smyrnensis* in Assam made nests, in hollows between rocks or in overhanging tree-roots, by carrying wet moss and placing it in layers on the site of the nest, and then fashioning a rough hollow. He describes how he watched a nest being built. Only a few nests were found, the majority of pairs making typical nests by burrowing into banks.

There are records of *P. capensis* nesting in stumps and holes in trees, and of *H. pileata* nesting in a hole in a branch (Baker 1934). If species that normally nest in banks can adapt themselves to holes in trees it seems possible that a species which can place vegetable matter in a crevice in rocks or roots to form a nest could similarly place material in the fork of a bamboo four feet from the ground, or possibly utilise an existing platform of plant material. It is a pity that there is no information regarding the vegetation immediately surrounding this nest site. Had Bingham attributed his record to *H. smyrnensis*, and not to *P. capensis*, it might have been received with less incredulity.

There is a note by R. E. Moreau in Nicoll's *Birds of Egypt* (Meinertzhagen, 1930) concerning the Pied Kingfisher *Ceryle rudis*. A drawing from an Ancient Egyptian tomb-painting shows a genet attacking young Kingfishers of this species which are assembled on a nest-like platform. He comments that: 'The artist who had observed birds sufficiently to draw that marsh-scene can hardly have been ignorant of the fact that Kingfishers breed in holes. Yet he depicts not only the brood of young on a flat nest, but also Kingfishers sitting on eggs on a flat nest.' This seems to suggest that *C. rudis* might, under certain circumstances, make a nest of the type described for *H. smyrnensis*.

There is little doubt that these clutches of small eggs attributed by Hume to *P. capensis*, and referred to as such in later works, are in fact the eggs *H. smyrnensis*. They are being re-identified as such in the National Collection. In view of the additional evidence there is justification for accepting Bingham's description of an exceptional nest-site as referring to the latter species.

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